

REMARKS/ARGUMENTS

Claims 1-20 and 23-36 remain pending in this application. Claims 21 and 22 have been canceled without prejudice or disclaimer. Claims 7, 21, 22 and 30 have been canceled without prejudice or disclaimer. Claims 1, 8, 10, 11, 18, 19, 29 and 36 have been amended. No new matter has been added.

Claim Rejections under 35 U.S.C. §112

Claims 1-7 and 11-17 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended the claims to overcome the rejection.

Claim Rejections under 35 U.S.C. §§ 102 and 103

Applicants request reconsideration of the rejections of claims 1-8, 11-23, 29-31 and 36 under 35 U.S.C. § 102(b) as being anticipated by Ahmadi et al, U.S. Patent No. 5,870,385; claims 24, 28 and 35 under 35 U.S.C. § 103(a) as being unpatentable over Ahmadi et al '385 in view of Kockman et al, U.S. Patent No. 6,909,737; claims 26 and 33 under 35 U.S.C. §103(a) as being unpatentable over Ahmadi et al '385 in view of Kojiro, U.S. Patent No. 6,356,540; and claims 27 and 34 under 35 U.S.C. §103(a) as being unpatentable over Ahmadi et al '385 in view of Kojiro '540 and further in view of Naddell et al, U.S. Patent No. 5,613,213.

This invention relates to a base station using direct sequence spread spectrum (DS)

wireless communication with a wireless terminal via radio waves, and to a method of setting up an available frequency band for use in a base station which comprises a wired communication unit connected to a wired LAN, and a wireless communication unit communicating with a wireless terminal via radio waves. As recognized by the Applicants, the task of allocating frequencies to base stations of this type is typically performed manually. Therefore, as more base stations are used in the same area, it becomes more difficult to implement the optimum setup because of the possibility of interference among the base stations. Therefore, the setup task takes a long time. Further, the addition of more base stations in the same area results in more wireless terminals connected to the base stations. The wireless terminals may be, for example, a personal computer or a peripheral device (see, page 8, lines 7-10 of the specification). To solve these problems, the frequency allocation to be used by a newly added wireless base station using direct sequence spread spectrum (DS) is executed automatically by performing a scan for existing base stations and allocating an unused frequency bandwidth that will not interfere with the existing base stations in the area surrounding the newly added base station or when the configuration of a base station is changed.

Specifically, referring to Figs. 1-4 of the present invention, when a base station, such as a wireless hub A2, is added to a wired LAN, a scan is performed for all frequency bandwidths (all channels) available for the wireless hub to check to see if there are other wireless hubs in the coverage area of the wireless hub A2. See the flow chart of Fig. 4, step 404. In particular, the scan checks to see if antenna 131 of wireless hub 130 in FIG. 3A receives signals in any of

the frequency bandwidths, which would be output at predetermined intervals by existing wireless hubs. If another wireless hub is present in the coverage area of the wireless hub A2, the information on that wireless hub (A1) is added to the location information (e.g. memory 135) stored in the wireless hub A2 (step 406 of Fig. 4). In general, the wireless hub that is added (A2) sets up channel values automatically and starts operation. If there is a problem with the current channel setup (the channel used by the wireless hub A1 is the same as that used by the wireless hub A2 that was set up during initialization for example), the channel of A2 is switched to a free channel. After channel setup processing is performed by the newly added wireless hub A2, it outputs a broadcast packet over the wired LAN (step 412, Fig. 4) to send the location information memory in FIG. 2B, to which the information on the wireless hub A2 has been added, to other wireless hubs on the wired LAN. In response to the broadcast packet, each wireless hub checks if it must send its own information to the wireless hub A2 and does so if necessary, and then the wireless hub A2 reflects the contents on its own location information. This processing allows a newly added wireless hub to collect all location information.

On the other hand, Ahmadi, U.S. Patent No. 5870,385 relates to a wireless communication system that uses base stations connected to one another using a wired LAN and that has remote stations that communicates using a multicell radio LAN using frequency hopping signaling. Different hopping patterns are generated and assigned to the base stations having overlapping coverage areas to avoid interference. See col. 8, lines 39-41 of the reference. Accordingly, Ahmadi is directed to wireless technology using frequency hopping, whereas the present invention uses DS or direct sequence spread spectrum technology.

Therefore, Applicants' location information is not comparable to the cited distance information of the table shown in Fig. 12 of the patent. Further, Ahmadi's table indicates wireless hopping patterns at adjacent base stations, whereas Applicants' location information represents the frequency bandwidth information of adjacent and overlapping communication areas between base stations. Therefore, Ahmadi does not anticipate or render obvious the invention of claims 1-8, 11-21, 29-31 and 36 and the rejection should be withdrawn.

Regarding the rejection of claims 24, 28 and 35, the rejection relies upon Kockman et al for disclosing a method of re-assigning a frequency for a spread spectrum communications system. However, the reference does not make up for the aforementioned deficiencies in Ahmadi, and therefore the combination of Ahmadi and Klockman does not render the invention of claims 24, 28 and 35 obvious under 35 U.S.C. § 103.

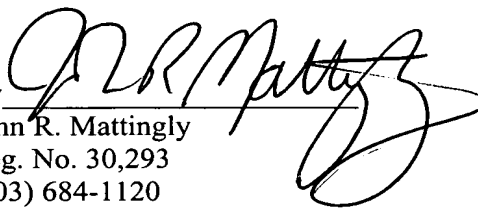
The rejections of record further rely upon Kojiro and Naddell in rejecting claims 26, 27, 33 and 34, however, these claims are dependent claims and are therefore patentable at least for depending from a base claim asserted to be allowable for the foregoing reasons.

CONCLUSION

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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